



Via Web

November 5, 2015

Office of the Chief
USDA Forest Service
Attn: Appeal Reviewing Officer
1400 Independence Ave., SW
EMC-LEAP, Mailstop 1104
Washington, DC 20250
Email: Appeals-chief@fs.fed.us

Notice of Appeal: Prescott National Forest Land and Resource Management Plan

Pursuant to 36 C.F.R. § 219.35 Appendix A, this notice of appeal filed is under the optional appeal procedures by the Center for Biological Diversity and Sierra Club Grand Canyon Chapter (collectively, “appellants”) regarding the Record of Decision (“ROD”) and Final Environmental Impact Statement (“FEIS”) for the Prescott National Forest Land and Resource Management Plan (“Forest Plan”). Legal notice of the ROD and opportunity to appeal published on August 7, 2015, in *The Daily Courier* newspaper of Prescott, Arizona, making this notice of appeal timely. Appellants supplied the Forest Service with specific written comment at various stages of the planning process and may appeal.

DECISION DOCUMENT: *Record of Decision for the Prescott National Forest Land and Resource Management Plan.*

DATE DECISION SIGNED: May 5, 2015.

RESPONSIBLE OFFICIAL: Calvin N. Joyner, Southwestern Regional Forester.

DATE DECISION PUBLISHED: August 7, 2015.

PUBLICATION VENUE: *The Daily Courier*, Prescott, Arizona.

LOCATION: The Prescott National Forest covers approximately 1.2 million acres of central Arizona located mostly within Yavapai County, with small a portion in Coconino County.

APPELLANTS:

Center for Biological Diversity

Jay Lininger, Senior Scientist
P.O. Box 710
Tucson, AZ 85702-0710
Tel: (928) 853-9929
Email: jlininger@biologicaldiversity.org

Sierra Club Grand Canyon Chapter

Sandy Bahr, Chapter Director
202 E. McDowell Rd., Suite 277
Phoenix, AZ 85004
Tel: (602) 253-8633
Email: sandy.bahr@sierraclub.org

APPELLANTS' INTERESTS

The Center for Biological Diversity (“Center”) is a non-profit public interest organization with offices in Tucson and Flagstaff, Arizona. Its mission is to conserve and recover imperiled fauna and flora and their habitats through science, education, policy and law. The Center has over 50,000 members, many of whom live in Arizona and maintain long-standing interests in management of the Prescott National Forest. Members of the Center, including the undersigned, regularly use and enjoy, and will continue to use and enjoy the forest, grassland, shrubland and riparian environments found in the Prescott National Forest for observation, research, aesthetic enjoyment and other recreational, scientific and educational activities. Members of the Center also have and shall continue to research, study, observe and seek protection for at-risk species occurring in their natural habitats on the Prescott National Forest for scientific, recreational, conservation and aesthetic benefits including appreciation of the existence of a full complement of native biological diversity found in wild places of Arizona. Forest Service violations of law and policy in its revision of the Prescott Forest Plan may indirectly or cumulatively cause significant adverse effects to species that are endangered, threatened or sensitive, and may contribute to the degradation of habitats, food resources and populations of species whose viability or recovery the Forest Service is obligated to realize. Effects to the environment that will result from implementation of management direction contained in the revised Prescott Forest Plan will harm the interests of the Center and its members in the conservation of nature and the recovery of imperiled biota. The Center demonstrated specific interests in the Forest Plan revision process with specific written comment at every opportunity in the planning process. Therefore, the Center may appeal.

The Sierra Club is one of the nation’s oldest and most influential grassroots organizations in the United States. Its mission is “to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth’s ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments.” The Sierra Club has more than 2.4 million members and supporters with 35,000 in Arizona as part of the Grand Canyon (Arizona) Chapter. Members of the Sierra Club have long been

committed to protecting and enjoying our national forests, including the Prescott National Forest, through various types of recreation including hiking, backpacking, wildlife viewing and more. Members of the Sierra Club, including the undersigned, have a substantial interest in continuing to use the Prescott National Forest, and are adversely affected and aggrieved by Forest Service failure to protect the land and comply with the law in the decision at appeal. The Sierra Club offered specific written comment on the Prescott Forest Plan revision and may appeal.

REASONS

I. Failure to consider or adequately respond to reasonable planning alternatives.

The National Environmental Policy Act (“NEPA”) requires the Forest Service to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(2)(E). Regulations implementing the NEPA obligate the agency to “[r]igorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.” 40 C.F.R. § 1502.14(a). The alternatives considered are the “heart” of an environmental impact statement. 40 C.F.R. § 1502.14. Even as it considers and analyzes foreseeable impacts of the proposed action, the Forest Service must “[r]igorously explore and objectively evaluate all reasonable alternatives.” *Id.* at § 1502.14(a); *see also* 36 C.F.R. § 219.12(f) (1982). The EIS must present environmental impacts of the proposed action and reasonable alternatives “in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public.” 40 C.F.R. § 1502.14. The NEPA process must “identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” *Id.* at § 1500.2(f).

Additionally, regulations implementing the National Forest Management Act (“NFMA”) require the Forest Service to consider planning alternatives during the NEPA process that are “distributed between the minimum resource potential and the maximum resource potential to reflect . . . the full range of . . . environmental resource uses and values.” 36 C.F.R. § 219.2(f)(1) (1982). The alternatives considered must “facilitate analysis of opportunity costs and of resource use and environmental trade-offs among alternatives.” *Id.*

Standards of the Administrative Procedure Act (“APA”) control review of agency compliance with requirements of the NEPA and the NFMA. *Southeast Alaska Conservation Council v. Fed. Highway Admin.*, 649 F.3d 1050, 1056 (9th Cir. 2011). An agency’s decision may be set aside if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Review under the “arbitrary and capricious” standard is based on “a consideration of the relevant factors and whether there has been a clear error of judgment.” *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971).

A. Aquatic conservation strategy

On November 28, 2012, the Center commented in response to the draft environmental impact statement (“DEIS”) for revision of the Prescott Forest Plan, “The Forest Service should

consider and fully analyze environmental impacts of an action alternative that responds to changes in global and regional climate due to increasing atmospheric concentrations of greenhouse gases...” In particular, on pages 21-22 of that DEIS comment letter, we proposed:

At a minimum, one reasonable alternative should provide a substantial increase in protection for plant and animal species that exist on national forest lands responding to scientific uncertainty regarding the magnitude of climate change impacts on habitat and water availability. NFMA requires provision for the diversity of plant and animal communities based on the suitability and capability of the land. 16 U.S.C. § 1604(g)(3)(B). Scientists including Forest Service researchers acknowledge climate change as a key threat to biodiversity (Malcom et al. 2006, Matthews et al. 2004). Due to uncertainties regarding impacts of climate change on biodiversity, and the clear mandate of NFMA to provide for diversity, the Forest Service must consider and fully analyze an action alternative that errs on the side of ecological caution (a “no-regrets strategy”) by managing national forest lands as a safe harbor and refuge for fish and wildlife, even at the expense of competing multiple use activities, such as programmed livestock grazing, timber production or motorized recreation. None of the alternatives considered in the DEIS reflect this proposed course of action. All of them consider the same acreage to be “suitable” for livestock grazing despite significant new information that invalidates analysis carried forward from the 1980s. All of them would maintain the existing transportation network. And all of the alternatives, other than Alternative A [no action], would remove protective standards and guidelines for wildlife. The range of alternatives in the DEIS is not adequate to meet NEPA.

The Forest Service’s only specific response to the reasonable proposed alternative cast it as “duplicative of the action alternatives already considered in detail,” and it referenced a section in the FEIS discussing alternatives that were “considered but eliminated from detailed study.”¹ The alternatives considered but eliminated speak for themselves. *See* FEIS at 32-34 (dismissing alternatives that respond to climate change, phase-out livestock grazing, adopt “hands-off” management, adjust trail mileage and limit road density).

Notably, the Forest Service did not consider or respond to the Center’s detailed proposal for an “aquatic conservation strategy” intended to maintain and restore aquatic and riparian habitats on the Prescott National Forest. On page 30 of its DEIS comment letter, the Center introduced the alternative stating,

An ecosystem approach is warranted to stop habitat degradation, maintain habitat and ecosystems that are currently in good condition, and to aid recovery of at-risk aquatic species and their habitat. Although federal land management cannot arrest all sources of fisheries decline and degradation of aquatic habitats, the Forest Service can implement binding standards and guidelines to maintain and restore aquatic and riparian habitats in project-level management of national forest lands. This approach is both prudent and

¹See “ALT-07” under “Statement & Response” on the “Public Comments and Responses to Comments spreadsheet,” available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3821744.xlsx (accessed November 5, 2015).

necessary given the current perilous state of most native fish populations and other aquatic organisms.

On pages 30-32, the Center developed the reasonable planning alternative in detail with specific reference to decisions already made by the Forest Service in the Pacific Northwest Region to implement such an “aquatic conservation strategy” in forest management plans:

The Forest Service adopted an ecosystem approach to management of aquatic habitat and at-risk fisheries on federal lands in the Pacific Northwest. The Aquatic Conservation Strategy (“ACS”) of the Northwest Forest Plan designates “key watersheds” in large drainage basins that offer the highest quality aquatic habitat to support recovery of fish populations. Key watersheds tend to be free of dams or host large areas of upland terrestrial habitat without roads, where aquatic organisms enjoy the greatest likelihood of persistence. Key Watersheds are withdrawn from programmed timber harvest and increases of road density are prohibited. The ACS further designates “riparian reserves” as a discrete land allocation within specified distances from streams or wetlands where the management must maintain or restore aquatic habitat. Standards and guidelines for active management of riparian reserves require proposed action to meet or “not prevent attainment” of nine discrete “ACS objectives” related to physical, chemical and biological properties of aquatic ecosystems (USDA 1993).

In addition to establishing management areas, or land allocations, the ACS compels the Forest Service to undertake watershed analysis at the scale of large drainage basins (~50,000 acres) to account for critical factors affecting aquatic habitats including road density, vegetation cover, and geologic stability, among others. Active forest management in key watersheds and riparian reserves, as well as site-specific designation of riparian reserves, is preceded and informed by watershed analysis (USDA 1993).

Moreover, the ACS calls for restoration of aquatic ecosystems where past management activities have degraded indicators of ecological function expressed by nine ACS objectives. Examples include road density reduction, removal of in-stream structures, and cessation or regulation of livestock grazing in floodplains and wetlands, as well as a prohibition on use of mitigation or planned restoration in site-specific project activities as a substitute for preventing degradation of existing high-quality aquatic habitat (USDA 1993).

The Center strongly recommends that the Forest Service adopt an ecosystem approach to management of aquatic habitats in this Forest Plan revision similar to what the agency did nearly two decades ago in the Pacific Northwest. It is clear that existing standards and guidelines and best management practices, even if fully funded, implemented and monitored, are inadequate to meet statutory and regulatory requirements to provide for viable fish and wildlife populations that depend on aquatic habitats.

The Draft Plan would roll back virtually all of the standards and guidelines pertaining to aquatic habitat conservation and replace them with discretionary guidelines and desired conditions. Clearly, more protective standards are required. Carrying forward or

modifying existing standards and guidelines to make them more protective of aquatic ecosystems would help to demonstrate that the Forest Service is serious about meeting statutory and regulatory requirements under NFMA rather than maximizing foresters' discretion to do anything, anywhere, anytime and to any effect.

The November 28, 2012 DEIS comment letter advanced a reasonable planning alternative that the Forest Service plainly failed to consider in detail, or eliminate from study with reason, in violation of the NEPA and the NFMA.

The only Forest Service response to the comment stated, “[T]he Forest Service identified two priority needs for change regarding the management of aquatic habitats. With information on existing and desired aquatic ecosystem conditions, plan components were developed to address these needs for change.”² The “priority needs for change” regarding aquatic habitats speak for themselves and do not compel any specific management action. *See* Forest Plan at 5-6 (needs for change) and 9-13 (concept descriptions). The response to comment quoted above did not identify any specific plan components that were developed to address those needs for change.

Among the relevant plan components, some of the “forest wide desired conditions” are relevant to aquatic conservation, but they are not action-forcing, nor do they control management actions. *See id.* at 20-23 (watersheds), 41-42 (riparian gallery forests), 44-45 (aquatic wildlife). Plan objectives 18 to 24 describe potential management actions that may affect aquatic habitats and species, however, by Forest Service admission, objectives also are not action-forcing, nor do they control management. *See id.* at 64-66 (watersheds), 66-67 (aquatic and terrestrial wildlife habitat). The only relevant standards that bind management are designed solely to prevent chemical or biological toxins from entering waterways due to use of mechanized equipment and tools. *See id.* at 72 (watersheds). All of the other plan components relevant to aquatic conservation are guidelines which, as explained *infra*, are subject to management interpretation and therefore are not enforceable by the public. *See id.* at 72-73 (watersheds), 74 (soils), 79 (aquatic wildlife).

On November 28, 2012, the Center commented in response to the DEIS, “Clearly, more protective standards are required. Carrying forward or modifying existing standards and guidelines to make them more protective of aquatic ecosystems would help to demonstrate that the Forest Service is serious about meeting statutory and regulatory requirements under NFMA rather than maximizing foresters' discretion to do anything, anywhere, anytime and to any effect” [*emphasis added*]. Rather than consider or respond to a plainly reasonable alternative to increase protection for aquatic ecosystems, the Forest Service rolled back previous standards and guidelines, and replaced them with infinitely discretionary plan components. The Center's proposed alternative was not “duplicative” of the alternatives considered by the Forest Service. Rather, it would more decisively met the needs for change identified by the Analysis of Management Situation, including urgent needs to maintain and restore imperiled aquatic ecosystems on the Prescott National Forest.

² See “WILD-O8” under “Statement & Response” on the “Public Comments and Responses to Comments spreadsheet,” available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3821744.xlsx (accessed November 5, 2015).

If an alternative meets the purpose and need, it is reasonable, and therefore must be considered. *Native Ecosystems Council*, 428 F.3d at 1247-48 (“In judging whether the Forest Service considered appropriate and reasonable alternatives, [the] focus [is] on the stated purpose [of the action]”); *also see* 40 C.F.R. § 1502.14(a). The Center’s proposed alternative is reasonable because it provides a framework for management that would meet the stated needs for change while prioritizing increased protection of aquatic habitats and associated species, thereby establishing an alternative of “minimal resource potential” to be used for comparison of environmental trade-offs in management planning, per the intent of the NFMA. The agency’s failure to state a reason for eliminating the alternative from detailed consideration is arbitrary and capricious, and it violates the NEPA, the NFMA and the APA. Its response to comment casting the alternative as “duplicative” of others is likewise arbitrary and capricious, and it violates the NEPA and the APA.

B. Research Natural Area designations.

On November 28, 2012, the Sierra Club commented in response to the DEIS for revision of the Prescott Forest Plan that it “disagrees with the decision by the PNF to not recommend Research Natural Areas (RNAs) in the Draft Plan.” That disagreement persists with the ROD. There still are no RNAs in the Prescott National Forest.

The cottonwood-willow riparian forest along the upper Verde River handily meets the criteria for administrative designation as RNA. The Sierra Club commented in response to the DEIS,

All Alternatives included in the Draft Plan undervalue the rare and currently healthy riparian ecosystem along the upper Verde River.

The upper Verde River is a remarkable ribbon of life through the heart of Arizona. It provides important habitat for many wildlife species, including species that are threatened or endangered, plus provides opportunity for quiet recreation for countless visitors, including those who hike, kayak, fish, and wildlife watch.

The upper Verde River Watershed comprises 5.8 percent of the land area in Arizona, yet it supports a surprisingly large fraction of Arizona’s vertebrate species: 78 percent of breeding birds, 89 percent of bats and carnivores, 83 percent of native ungulates, 76 percent of reptiles and amphibian genera (including 94 percent of lizards and 68 percent of snake genera) — an impressive concentration of wildlife (See Biological Inventory, Citizens’ Proposal for the Upper Verde Wild and Scenic River). Ecologists estimate that 80 percent of vertebrate species in a watershed depend on riparian habitat for some or all of their life cycle. The narrow riparian zone along the riverbanks is the heart of a watershed; in a generally arid region, riparian areas are lush, green ribbons full of hospitable opportunities for life.

Riparian communities are biologically the richest habitats throughout the United States; in the Southwest these thin green ribbons are regional hot spots of landscape biodiversity. Riparian zones along perennial rivers occupy less than 0.38 percent of Arizona’s

landscape and much of this riparian habitat has been destroyed or severely degraded by a wide range of anthropogenic activities. Throughout the Southwest these activities have significantly impacted all major riparian communities: agriculture, grazing, logging, mining, urbanization, and the intentional and accidental introductions of exotic species. The result is direct and indirect riparian and aquatic habitat destruction and degradation caused by groundwater pumping, surface water diversions, dams and other hydrologic changes, siltation and bank erosion, exotic species, overfishing, and a remarkable diversity of pollution agents.

[*Emphasis added.*] In addition, the Sierra Club commented that the upper Verde River supplies an indisputably valuable reference site for ecological restoration of riverine aquatic ecosystems in Arizona:

Today, the Verde River above Horseshoe Dam is the longest (approximately 150 miles) and one of the last perennial, free flowing, relatively pristine rivers in Arizona and the Southwest. The upper Verde's banks comprise a significant portion of the remaining high quality riparian area in Arizona. The lush riparian gallery forest, the rarest named forest type in north America, along the upper Verde River is the lifeblood of the watershed – essential life support for most of Arizona's wildlife species – a truly irreplaceable and endangered ecological resource.

Forty miles of the upper Verde flows through the PNF, supporting a rich collection of threatened and endangered species protected under the Endangered Species Act (ESA). According to a study by The Nature Conservancy, "Arizona's native fish species are among the most imperiled fauna in North America," and the upper Verde is one of the best native fish environments in Arizona. Native fish species currently present in the Verde include the Sonora sucker (*Catostomus insignis*), desert sucker (*Catostomus clarkia*), longfin dace (*Agosia chrysogaster*), speckled dace (*Rhinichthys osculus*) and an experimental, nonessential population of Colorado pikeminnow (*Ptychocheilus lucius*). Beginning at the headwaters and extending throughout the PNF, the upper Verde is now designated critical habitat for the endangered spikedace (*Meda fulgida*) and loach minnow (*Tiaroga cobitis*) (77 FR 10810 February 13, 2012). On the upper Verde, razorback sucker (*Xyrauchen texanus*) critical habitat extends from Perkinsville downstream to Horseshoe Dam (59 FR 13374, March 21, 1994). Roundtail chub (*Gila robusta*), abundant in the river reach flowing through the Muldoon potential wilderness area and throughout PNF, is a candidate species for ESA listing (71 FR 26007, May 3, 2006). Additional sensitive aquatic species of concern include the candidate Mexican garter snake (*Thamnophis eques*) (73 FR 71788, November 25, 2008), narrow-headed gartersnake (*Thamnophis rufipunctatus*), and the lowland leopard frog (*Lithobates yavapaiensis*).

Avian species protected by the ESA are also present. The yellow-billed cuckoo (*Coccyzus americanus occidentalis*), found from the Verde headwaters and downstream, is a candidate species for ESA protection (66 FR 38611, July 25, 2001). The southwestern willow flycatcher (*Empidonax traillii extimus*) is ESA listed as endangered with critical habitat along the middle and lower Verde (60 FR 10694, February 27, 1995);

we are now collecting evidence that it is present along the upper Verde. The river provides important habitat for nesting and wintering populations of the southwestern desert nesting bald eagle (*Haliaeetus leucocephalus*).

The Forest Service responded to the comments quoted above with information about the purpose of RNA to support research. It admitted that the upper Verde River on the Prescott National Forest meets criteria for RNA establishment including underrepresentation of aquatic ecosystems in the Southwestern Region RNA network.³ However, its stated rationale for excluding the upper Verde River from the RNA network is arbitrary and capricious because it rests upon an unrelated criterion, “protection,” rather than representation and research opportunities:

The upper Verde River was identified as a potential RNA, but the Forest Supervisor chose not to develop interim management direction and recommend the area for RNA establishment. This is because segments of the upper Verde River are already classified as an eligible wild and scenic river, and the plan contains direction in the form of desired conditions and standards and guidelines that protect the outstandingly remarkable value of eligible river segments. It was determined that recommendation as an RNA would not provide additional meaningful protection for the upper Verde River.⁴

The existence of factors making the upper Verde River eligible for designation by Congress as a Wild and Scenic River are irrelevant to the RNA evaluation criteria. Further, whether the Forest Service included in the Prescott Forest Plan components that “protect” Wild and Scenic eligibility factors or not, the specific criteria for RNA evaluation remain unaddressed.

Furthermore, the Forest Service admitted in response to comment on the DEIS that it reviewed “eight types of under-represented terrestrial and aquatic ecosystems on the Prescott NF,” and that Upper Grapevine Creek met criteria for RNA designation “as an underrepresented seeps and springs aquatic ecosystem.” However, “The Forest Supervisory chose not to forward the recommendation to the Regional Forrester for approval because of interests in actively managing the area’s natural resources in collaboration with the Arizona Game and Fish Department.”⁵ Once again, the stated rationale for excluding Upper Grapevine Creek from RNA designation is arbitrary and capricious because Forest Service policy does not prohibit active management within RNA. See Forest Service Manual (“FSM”) 4063 (Research Natural Areas). Indeed, FSM 4063.3 specifically provides for active management including livestock grazing, removal of exotic species and physical improvements to advance the purpose of RNA establishment, and FSM 4063.34 allows the Forest Service to implement “tried and true” methods of vegetation management within RNA. The agency’s response to comment is not supported by policy, and the Forest Service never identified any specific management that it

³ See “RNA-01” under “Statement & Response” on the “Public Comments and Responses to Comments spreadsheet,” available at: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3821744.xlsx (accessed November 5, 2015).

⁴ *Id.*

⁵ *Id.*

wishes to undertake at Upper Grapevine Creek that would be precluded by RNA establishment there.

The aquatic habitat corridor on the upper Verde River within the Prescott National Forest has supported over 17 years of fish monitoring, habitat manipulation and research to support ecological restoration and recovery of threatened and endangered species. Species of Concern and others that require active management for population recovery are relatively abundant along the upper Verde River. The corridor now shows no evidence of major anthropogenic disturbances or exotic plant infestations, and the area supplies a relatively pristine baseline, or reference condition, for restoration of other desert river ecosystems in Arizona. Prescott College, the Museum of Northern Arizona, Northern Arizona University, Yavapai College, the U.S. Geologic Survey, The Nature Conservancy, the U.S. Fish and Wildlife Service, Arizona Game and Fish Department (AZGFD), the Sierra Club Water Sentinels, Arizona Department of Environmental Quality (ADEQ), and local high schools all use the upper Verde River corridor for teaching and research.

The Forest Service's stated reasons for disregarding proposals to designate the upper Verde River and Upper Grapevine Creek as RNA are arbitrary and capricious, and failure to carry forward the proposals for detailed consideration in action alternatives violates the NEPA, the NFMA and the APA. Moreover, the response to comment invokes factors unrelated to RNA evaluation criteria as reasons for declining to advance recommendations for RNA establishment, in violation of the NEPA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for detailed study of an action alternative that incorporates an aquatic conservation strategy, as discussed above and described in detail within the planning record.
- Withdraw the ROD and remand the EIS for detailed study of an action alternative that includes RNA designations on the upper Verde River and at Upper Grapevine Creek.

II. Arbitrary and capricious selection of management indicator species.

Regulations implementing the NFMA require the Forest Service to determine “the suitability and potential capability of National Forest System lands for [...] providing habitat for management indicator species.” 36 C.F.R. § 219.20 (1982); *also see* FEIS Vol. 2 at 118 (“In the 1982 Planning Rule Provisions, national forests are required to manage for viable populations of native and desired nonnative vertebrate species in the planning area (Sec. 219.19)”; 122 (“Management indicator species are vertebrate or invertebrate species whose population changes indicate the effects of management activities included in plan components”).

The Prescott Forest Plan designates pronghorn antelope as the management indicator species (“MIS”) for grassland vegetation communities and northern goshawk as the MIS for ponderosa pine forest. *See* FEIS Vol. 1 at 85-87. Those grassland and forest potential natural

vegetation types (“PNVT”) together comprise just 256,015 acres (20.5 percent) of the 1,247,328-million-acre Prescott National Forest. *Id.* 43 (Table 3). The Forest Plan also designates “aquatic macroinvertebrates (various species)” as MIS for aquatic habitat on the Prescott National Forest. *Id.* 86 (Table 16). Aquatic habitats comprise an estimated 863 acres of the national forest (USDA 1987: 95 (Table 26)).

The Forest Plan does not designate any MIS associated with the juniper grassland (137,274 acres), piñon-juniper evergreen shrub (463,296 acres), interior chaparral (315,445 acres), piñon-juniper woodland (36,263 acres) or desert (5,919 acres) vegetation communities in the Prescott National Forest. In addition, no MIS is selected for 12,439 acres in the “Riparian Gallery Forest” PNVT. The Forest Service never explained why it declined to identify MIS that would indicate management effects on nearly 80 percent of the Prescott National Forest.

In response to comment on the DEIS regarding MIS selection, the Forest Service stated, “There is no requirement for a minimum number of MIS.” FEIS Vol. 2 at 64. That statement is true, however the NFMA planning regulations require the agency to manage national forests for viable populations of native and desired nonnative vertebrate species “*in the planning area.*” 36 C.F.R. § 219.19 (1982). The Forest Service cannot defend a contention that its management for wildlife viability in the Prescott National Forest is reliably indicated by just two terrestrial species and an invertebrate assemblage that occur on a small fraction of the planning area.

The Forest Service further responded to comment with recital of its MIS selection criteria, and it referenced a document titled, “‘Prescott National Forest Management Indicator Selection Process’ (Forest Service, 2011h)” as the sole item of information in the record supporting its MIS selections. FEIS Vol. 2 at 65-66. Notably, the FEIS does not reference or provide a citation for the document mentioned by the Forest Service in the passage quoted above. *See id.* at 242 (no document is attributed to the agency as “2011h”). The Web link provided in the response to comment (<http://www.fs.usda.gov/main/prescott/landmanagement/planning>) quoted above leads to an ancillary page titled, “Forest Plan Revision Concurrent Processes,” which contains a link to one relevant document Titled, “Prescott National Forest – Management Indicator Species Selection Process.” We presume that this is the item that was omitted from references section of the FEIS and should have been listed as “2011h.”

The eight-page “Management Indicator Species Selection Process” document identifies several species in the Prescott National Forest that meet the MIS selection criteria. It presents no basis for the Forest Service’s decision to limit the selection of MIS to two species (antelope and goshawk) and one assemblage (aquatic macroinvertebrates). On page two of the document, Table 1 entitled “Probable management activities under revised plan and MIS by habitat/vegetation type” includes a field that identifies “Lowland Leopard Frog, Arizona toad, Aquatic Macro-invertebrates, Tamarisk , Western Red Bat, Yellow-billed Cuckoo, Lucy’s Warbler” as MIS for “Riparian/Warm Water Habitat.” On page seven of the same document, the Forest Service states under the heading “Results,”

We developed a list of potential species and screening criteria as shown in the accompanying table. At day’s end, there was consensus for selecting pronghorn,

northern goshawk, and aquatic macroinvertebrates as the top three MIS. Turkey was considered as a possible alternative representing pine forest ecosystems.

The accompanying table on page 8 supplies no information to support a conclusion that the selected MIS are the “Best Picks,” nor does it state any reason why other species that meet the MIS criteria were not selected. For example, lowland leopard frog (*Lithobates yavapaiensis*) is a “sensitive species” whose viability is of management concern that is strongly associated with riparian habitat on the Prescott National Forest and vulnerable to invasion of exotic predators and chytrid fungus. Presumably, its habitat and population trends would strongly indicate the effect of Forest Service management activities in its habitat, including livestock grazing, which strongly influences the presence and spread of predators and disease. Nevertheless, the document is silent regarding any reason why lowland leopard frog was not selected as a MIS. Though the table on page 8 indicates that the frog is affected by factors other than national forest management, it indicates the same for pronghorn antelope, which was selected as a MIS and is strongly affected by off-forest habitat loss. Clearly, factors affecting the species other than Forest Service management were not deciding criteria for MIS selection.

The absence of reason in the record for failing to select lowland leopard frog as a MIS raises a serious question about the MIS selection process in general because it is one of the most widely distributed sensitive aquatic native vertebrate species on the Prescott National Forest. *See* USDA (2011i: 23 and 41-42) (Tables 10 and 25) (showing lowland leopard frog distribution).⁶

It is found in small to medium streams, and occurs in small springs, stock ponds, and occasionally in large rivers. This species is generally restricted to permanent waters below elevations of 6,400 feet. The greatest threats to this species are habitat alteration and fragmentation, accentuated by the introduction of non-native predatory and competitive fishes, crayfishes, and bullfrogs [...] Trends in population and habitat in the Verde River and other streams have decreased from historical levels because of the introduction and establishment of non-native aquatic species which are predatory and/or competitive with the native species and reduced habitat quantity and quality from water diversions, nutrient enrichment from agricultural practices, excess sedimentation from land development in the watersheds, and introduction and establishment of noxious plant species.

Id. at 40-41. The lowland leopard frog is an ideal indicator of watershed health because it exists within small headwater drainages where cumulative effects of management activities may accumulate and influence riverine habitat conditions over time. This is particularly true wherever livestock grazing and other land uses continue to affect occupied habitat on the Prescott National Forest. *See id.* at 62 (grazing, mining, and vegetation treatments occur across local watersheds on all land ownerships including federal). It is inexplicable that the Forest Service did not consider the frog as a “Best Pick” among MIS, even though it clearly meets all relevant selection criteria. The absence of reason for failing to designate the frog as MIS for riparian habitat is arbitrary and capricious, and it violates the NEPA, the NFMA and the APA.

⁶ The FEIS references the *Prescott National Forest Plan Revision EIS Fisheries Specialist Report* as “USDA Forest Service 2011i.” *See* FEIS Vol. 1 at 242.

The Forest Service is not revising the Prescott Forest Plan on a blank slate. The 1987 Forest Plan designated MIS for all major vegetation communities, and the list included Abert squirrel, pygmy nuthatch, turkey, hairy woodpecker, mule deer, plain titmouse, rufous-sided towhee and Lucy's warbler (USDA 1987: 95 (Table 26)); *also see id.* ("In cooperation with the Arizona Game and Fish Department, 19 terrestrial indicator species were identified to monitor the conditions of the environment. By establishing baseline population data for these species, resource managers can monitor the existence of the prescribed diversity standards needed to accomplish the Forest Plan"); 205 (describing MIS as "wildlife species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate effects of management activities on a number of other wildlife species"). In particular, the Forest Service considered mule deer and titmouse populations to be indicators of management effects of piñon-juniper habitats, mule deer and towhee as indicators of effects to chaparral habitats, and Lucy's warbler an indicator of riparian habitat (USDA 1987: 95 (Table 28). Some MIS were selected in the prior Forest Plan to indicate specific seral states of vegetation communities. For example, Abert squirrel uniquely indicated early-seral ponderosa pine forest habitat, and pygmy nuthatch and turkey both indicated late-seral ponderosa pine forest conditions. *Id.* Only pronghorn antelope is considered an indicator of all seral stages in grassland habitats. *Id.*

The absence of reason in the planning record for failing to carry forward prior MIS designations in the revised Prescott Forest Plan to indicate management effects "in the planning area," as required by NFMA regulations, violates the NEPA, the NFMA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of MIS selection to include reasons for not selecting certain species and designating others as "Best Picks."
- Include among the MIS selected for the revised Prescott Forest Plan, at a minimum, lowland leopard frog.

III. Inadequate plan components to meet minimum management requirements for riparian areas, and failure to identify reasons for change of management approach.

Regulations implementing the NFMA establish "minimum specific requirements to be met" in land and resource management plans. 36 C.F.R. § 219.27 (1982). One of the requirements is, "Special attention shall be given to land and vegetation for approximately 100 feet from the edges of all perennial streams, lakes, and other bodies of water," otherwise known as riparian areas. *Id.* § 219.27(e) (1982). In order to establish management practices within riparian areas, the Forest Service must consider "[t]opography, vegetation type, soil, [and] climatic conditions." *Id.* Another requirement of the 1982 Planning Rule is that management prescriptions "preserve and enhance the diversity of plant and animal communities." *Id.* § 219.27(g) (1982). Additionally, the Forest Service must meet "[m]onitoring and evaluation requirements that will provide a basis for periodic determination and evaluation of the effects of management practices." *Id.* § 219.11(d) (1982).

The planning record establishes that the Prescott National Forest is one of the driest in the nation, and riparian areas are uniquely important as ecologically critical areas for maintaining species diversity and viability. Planning guidance for the Southwestern Region, also in the record, states that foreseeable effects of climate change to riparian areas include diminished water supply, contraction in the size of riparian ecosystems, susceptibility to invasion by nonnative plants and disruption of wildlife communities. “This information is to be used to develop social, economic, and ecological goals and desired conditions that reflect potential impacts while considering climate change,” according to regional guidance on forest planning and climate change.

The revised Prescott Forest Plan does not contain management guidance or monitoring questions specific to riparian areas that meet the minimum requirements of the NFMA, nor do the plan components reflect regional guidance regarding climate change. For example, the “Cottonwood-Willow Riparian Forest” section of the Forest Plan contains no components other than vaguely-worded desired conditions that are not expected to be met while the Forest Plan is in effect. Further, none of the desired conditions respond to threats of climate change identified by the Southwestern Region. The Forest Plan is not sufficient to meet the high standard of “special attention” to riparian ecosystems, and it does not provide for maintenance or protection of diversity and viability of species associated with riparian habitats.

In contrast, the 1987 Prescott Forest Plan, now repealed, contained a number of binding management standards that gave “special attention” to riparian areas, in accordance with NFMA implementing regulations. The reprinted version of the prior Forest Plan (USDA 2004: 30-31) contained specific “management direction” for “Riparian Areas” on Management Areas 2, 3, 4, 5 and 6 that are notably absent from the revised Prescott Forest Plan at appeal:

Management projects within riparian areas will be in accordance with legal requirements regarding flood plains, wetlands, wild and scenic rivers, cultural and other resources and will be in accordance with standards and guidelines identified in the Southwestern Regional Guide.

Projects impacting riparian areas will be designed to protect the productivity and diversity of riparian-dependent resources. Emphasize protection of soil, water, vegetation, wildlife and fish resources.

Riparian-dependent resources will have preference over other resources. Other resource uses and activities may occur to the extent that they support the objective of riparian enhancement.

No discretionary vegetation manipulation will occur within 200 feet of identified riparian capability area boundaries except where the objective is to enhance downstream productivity.

Riparian projects will be developed on a site-specific basis and in accordance with the Southwestern Regional Guidelines and Riparian Handbook.

Meet the following riparian standards in the Southwestern Regional Guide for 80 percent of riparian areas by the year 2030:

- Maintain at least 80 percent of the potential overstory crown closure of obligate riparian species.
- Manage resources to create or maintain at least three age classes of woody riparian species with at least 10 percent of the woody plant cover in sprouts, seedlings and saplings where site potential exists.
- Maintain at least 80 percent of the potential stream shading along perennial cold-water streams.
- Maintain adequate emergent vegetation to ensure compliance with the goals of the strategic plan.
- Maintain 80 percent of spawning gravel surface free of occlusive inorganic sediment.
- Maintain at least 80 percent of streambank linear distance in stable condition.
- Retain snags in riparian areas that are not a safety hazard.

The revised Prescott Forest Plan does not carry forward any of the standards or guidelines quoted above, and the record supplies no rationale for this sea change of management direction. Even with regard to livestock grazing, which is a causal factor in the deterioration of riparian areas on the Prescott National Forest (Beschta and others 2012), the Forest Plan contains no standards or guidelines that would constrain grazing in riparian areas. The lack of “special attention” to riparian areas in the plan violates the NFMA and the APA.

The revised Prescott Forest Plan lacks binding plan components (*i.e.*, standards and guidelines) to control management in riparian areas. It amounts to a roll-back, or repeal, of previous standards and guidelines that met the minimum requirements of the NFMA. The absence of reason for change of management approach to afford the Forest Service infinite discretion in riparian areas is arbitrary and capricious. The Ninth Circuit has held that an agency decision is arbitrary and capricious under the APA if it “entirely failed to consider an important aspect of [a] problem.” *Lands Council v. McNair*, 537 F.3d 981, 987 (9th Cir. 2008). In formulating the revised Forest Plan and the FEIS, the Forest Service failed to consider foreseeable effects to riparian areas from climate change, as laid out in regional guidance; failed to give “special attention” to riparian areas through plan components as required by the NFMA; and failed to incorporate any standards and guidelines for riparian areas, thereby providing no direction to “preserve or enhance” the species diversity of these areas, as also required by the NFMA. Further, “when an agency provides no explanation at all for a change in policy,” it is reason for holding that an agency action was arbitrary and capricious. *Lands Council v. Martin*, 529 F.3d 1219, 1225 (9th Cir. 2008).

Nowhere in the planning record does the Forest Service provide a rationale for eliminating the standards and guidelines for riparian areas contained in the 1987 Forest Plan. Therefore, the Forest Service's action here is arbitrary and capricious and in violation of the NEPA, the NFMA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of management direction and plan components applicable to riparian areas.
- Ensure that the revised Forest Plan contains adequate management direction and plan components to meet minimum management requirements of the NFMA.
- Develop meaningful monitoring questions and protocols for riparian areas that may be affected by management activities under the revised Forest Plan.

IV. Plan components do not ensure wildlife viability, and the FEIS fails to identify reasons for change of management approach.

Regulations implementing the NFMA state, "Plans guide all natural resource management activities and establish management standards and guidelines for the National Forest System. They determine resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management." 36 C.F.R. § 219.1(b) (1982). Standards and guidelines in forest plans must be "qualitative and quantitative." *Id.* at § 219.1(b)(12) (1982). Plans must establish "standards and requirements by which planning and management activities will be monitored and evaluated." *Id.* § 219.5(a)(7) (1982). Additionally, plans must define reasons for management practices chosen for each vegetation type and circumstance. *See id.* § 219.15 (1982). The Forest Service has a mandatory duty to ensure that "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." *Id.* § 219.19. A "viable" wildlife population is defined by the 1982 Planning Rule as one "which has the estimated numbers and distribution of *reproductive* individuals to insure its continued existence is well distributed in the planning area." *Id.*

Forest planning decisions in the form of land and resource management plans, such as the Prescott Forest Plan, directly affect the design and implementation of project-level activities. *See* 36 C.F.R. § 219.3(b) (1982); Forest Service Handbook ("FSH") 1909.12.11.13 and 1909.12.11.16 (W.O. Interim Directive No. 1909.12-2008-2, Nov. 17, 2008). Forest Plan revision results in actual, physical effects to the environment. *Citizens for Better Forestry v. U.S. Dept. of Agriculture*, 341 F.3d 961, 973 (9th Cir. 2003). Repealing environmental standards in a Forest Plan results in lesser or no environmental standards at the site-specific project level. *Id.* at 975. Plans governing subsequent forest management actions are environmentally meaningful decisions and result in effects that must be considered and disclosed under the NEPA. *See Idaho Conservation*, 956 F.2d at 1516; *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346, 1355 (9th Cir. 1994); *Resources Ltd. v. Robertson*, 35 F.3d 1300, 1303 (9th Cir. 1994).

The revised Prescott Forest Plan repeals virtually all standards and guidelines in the prior 1987 Forest Plan, as amended (“1987 Plan”). It amounts to a major rollback of environmental safeguards affecting management of forest resources including wildlife habitat and populations. It replaces prior standards and guidelines with vaguely worded “desired conditions” and “objectives” that are designed to maximize agency discretion and evade accountability in project-level management activities. The Forest Service clearly intends that desired conditions will drive site-specific project development and decision-making, even if they do not necessarily control project implementation on the ground.

Desired conditions are “goals,” and they are not enforceable in project-level decisions. *See* FEIS at 13 (contrasting desired conditions with standards and guidelines and distinguishing their respective influences on project-level management). Only standards are enforceable in project-level decisions. *See id.* Guidelines afford some level of accountability insofar as they require acknowledgement in project decisions, even if the Forest Service is not required to follow guidelines to the letter. *See id.*

A. Mexican spotted owl

Threatened Mexican spotted owl (“MSO”) exists on the Prescott National Forest. *See* FEIS at 76 (“Known nesting sites on the Prescott NF include areas near Mingus Mountain, in Prescott Basin, and at Crown King for a total of 15 protected activity centers...”). The FEIS states, “Existing habitat on the Prescott NF totals 26,448 acres,” but it is not clear how the Forest Service arrived at that estimate of suitable habitat. *Id.* The national forest contains more than 112,000 acres of mixed conifer and pine-oak habitats that may be suitable for MSO. *See id.* at 43 (Table 3) (PNVT acreage); *id.* (“The Mixed-Conifer with Frequent Fire PNVT (6,600 acres) was combined with the Ponderosa Pine Forest PNVT because they are described by the same biophysical setting model (e.g., vegetation structure and disturbance regime) developed by the Nature Conservancy. The Ponderosa Pine Forest PNVT was later renamed as Ponderosa Pine-Gambel Oak PNVT”). Moreover, about 44,814 acres of designated Critical Habitat for MSO exists on the Prescott National Forest. *Id.* at 76. At various places in the FEIS, the Forest Service reports gross differences of available habitat for MSO, in violation of the NEPA.

The revised Forest Plan replaces former standards and guidelines affecting management of MSO habitat with “coarse filter plan components” (*i.e.*, desired condition statements for pine-oak and mixed conifer PNVT) and “fine filter plan components” that are presumed to reduce viability risk. *See* FEIS at 74-75. The “fine filter” plan components that address terrestrial species viability concerns are “Wildlife Guidelines” 1, 2, 4, 5 and 7. Only “Guide-WL-1” specifically mentions “federally listed species habitat,” and it states that the Forest Service “should” apply “approved recovery plans” in project-level management actions. The guideline is discretionary, lacking any mandatory language, and it is unenforceable. According to the Forest Service, under this guideline, “[D]esigning and implementing projects using both the MSO recovery plan and best available science would be expected to lead to improved habitat conditions for the species. This combination of approaches would provide the flexibility necessary to manage for the recovery of the species, which could eventually have beneficial effects for individual MSO.” *Id.* at 88 (environmental consequences).

The proposed “Guide-WL-1” would replace all of the standards and guidelines that previously controlled management of forest habitat for MSO. It uses the permissive word “should,” rather than action-forcing words such as “will” or “shall.” See *U.S. v. UPS Customhouse Brokerage, Inc.*, 575 F.3d 1376, 1382 (Fed. Cir. 2009) (“‘Will’ is a mandatory term, not a discretionary one”); *New England Tank Indus. of N.H., Inc. v. United States*, 861 F.2d 685, 694 (Fed. Cir. 1988) (difference between mandatory term “will” and discretionary term “should”). The same is true for every one of the wildlife guidelines in the revised Prescott Forest Plan.

In *Ecology Center v. Castaneda*, 574 F.3d 652, 660-61 (9th Cir. 2009), the Ninth Circuit held that the language of guidelines incorporated into a forest plan did not “create a mandatory standard.” Instead, the guidelines were not enforceable under NFMA, because they were cast in “suggestive” language using the word “should,” and “merely recommended” a particular practice “when possible.” *Id.* at 661. As such, the wildlife guidelines in the Forest Plan merely invite land managers to acknowledge recovery plans for federally-listed species and consider application of recommended conservation measures in projects. The guidelines do not, in and of themselves, require implementation of recovery plans for threatened or endangered species in site-specific management activities.

The U.S. Fish and Wildlife Service (“FWS”) opined that continued implementation of discretionary management guidance under the pre-1996 Forest Plans in the Southwestern Region, including the Prescott Forest Plan, jeopardized the continued existence of MSO:

The Service finds that continued implementation of the existing forest plans will jeopardize the continued existence of the Mexican spotted owl and will adversely modify the species’ critical habitat. This biological opinion is based on the results of our analyses of the effects of continued implementation of the management direction contained in the existing forest plans for the National Forests of the Forest Service’s Southwestern Region. The Service believes that aspects of the existing forest plans do not provide for the physical and biological requirements of the Mexican spotted owl or its critical habitat. Additionally, the Service recognizes that much discretion exists on the part of forest managers at the project level in the implementation of forest plan guidance and direction. The broad range of effects that could result from the implementation of the management direction of the existing forest plans is suggested by the discretion forest managers use in their implementation of plan-level direction. As can be seen in the attached list of forest projects (Appendix A), the existing forest plans lack the management direction to prevent the development of forest project-level activities that are likely to adversely affect the Mexican spotted owl.

(USDI 1996a: 39). The FWS further stated that the amendments to Forest Plans, including the Prescott Forest Plan, with binding management standards adopted in a NEPA decision that required implementation of the MSO Recovery Plan (USDI 1995) formed a basis to “remove jeopardy” and “avoid adverse modification” of Critical Habitat:

The definition of standards and guidelines as given in the FEIS is assumed for this analysis. That definition states that standards and guidelines are, “the bounds or constraints within which all management activities are to be carried out in achieving forest plan objectives.” In the future, all forest activities carried out under the existing forest plans will be reviewed by the Service pursuant to Section 7 of the Endangered Species Act in terms of their conformity with these elements.

USDI (1996a: 39). The FWS based subsequent consultations under Section 7 of the Endangered Species Act (“ESA”) regarding Forest Service actions that may affect MSO on whether, and to what degree, those actions complied with standards and guidelines in the amended Forest Plans. After the Forest Service amended Forest Plans, including the Prescott Forest Plan, with a NEPA decision to formally adopt those mandatory standards and guidelines implementing recommendations of the MSO Recovery Plan, the FWS opined,

[I]mplementation of the forest plans, as amended by the new standards and guidelines of Alternative G in the FEIS, is not likely to jeopardize the continued existence of the Mexican spotted owl or result in the destruction or adverse modification of the species' critical habitat. Project-level actions and activities planned and implemented under these standards and guidelines, taken together, should promote the recovery of the owl.

USDI (1996b: 29). The FEIS supporting the revised Prescott Forest Plan contains no explanation why a return to unlimited management discretion that pre-existed the 1996 Forest Plan Amendments (USDA 1996a) will avoid jeopardy to MSO or adversely modification of Critical Habitat. Nor does it explain how unlimited management discretion in projects would maintain the viability of sensitive species that use similar habitat. *See* FEIS 213 (“Healthy pine forests provide important habitat for a variety of wildlife species and are essential to maintaining bird populations such as the northern goshawk and Mexican spotted owl”).

In addition to rolling back the standards and guidelines that controlled management of MSO habitat, the revised Prescott Forest Plan also repealed standards and guidelines that ensured viability of northern goshawk, a sensitive species whose viability is of management concern. Relevant desired conditions for ponderosa pine forest and guidelines naming the goshawk are the only direction in the revised Forest Plan for management activities in goshawk habitat. Like Guide-WL-1, discussed above, they are not enforceable.

Reliance on non-binding aspirational statements of desired conditions and suggested guidelines to inform, but not control, project-level decisions and site-specific management in lieu of enforceable standards was held to be unlawful. *See Citizens for Better Forestry v. U.S. Department of Agriculture*, 08-1927 (N.D. Cal., June 30, 2009). The absence of enforceable standards affecting MSO in the revised Prescott Forest Plan contradicts the NFMA. *See* 16 U.S.C. §§ 1604(c) and (g); 36 C.F.R. §§§§ 219.1(b), 219.11(c), 219.12(f)(9)(iii) and 219.15 (1982).

B. Northern goshawk and 14 prey species

The former standards and guidelines affecting management of northern goshawk habitat in the prior Forest Plan, now repealed, originated from scientific recommendations of Reynolds and others (1992). The Forest Service adopted those recommendations in a 1996 Record of Decision (USDA 1996a) and Final Environmental Impact Statement (USDA 1995) amending all Forest Plans in the Southwestern Region, including the Prescott Forest Plan. *See* USDA (1995: 24) (“Currently, the best guidelines we have for desired conditions for the distribution of structural stages are the goshawk guidelines. These guidelines recommend for a foraging area a vegetation structural stage distribution of 20% in early, 40% in mid and 40% in late structural stage). The Forest Service explained in the 1995 FEIS that the former goshawk guidelines provided for the viability of wildlife species associated with herbaceous and shrub-dominated vegetation communities within a matrix of interspersed forest patches:

Some species totally depend on one or more of these cover types and respective vegetation structural stages (VSS), while others are casual uses. Regardless of the degree of use, it is important to maintain a diversity of cover types and vegetation structural stages across landscapes to sustain healthy wildlife populations and communities.

This programmatic analysis of the alternatives is primarily based on three broad habitat characteristics that can be evaluated at the programmatic EIS level. These three wildlife habitat characteristics are cover type, vegetation structural stages (VSS), and forage production. Cover type and VSS represent the overstory characteristics of the habitat and forage production represents the understory. The structural stages are grouped by early, mid and late stages (VSS 1&2, VSS 3&4, and VSS 5&6, respectively).

Id. at 28-29. It accounted for environmental effects of implementing the Forest Plans on wildlife species that require “forage production” as a critical element of habitat. *See id.* 30. (“The alternatives that would produce the most forage, in decreasing order, are E, A, F, C, D and G. Since understory habitat is important for many of the non-*TES* wildlife species and there is a need to increase understory habitats” [sic]). The Forest Service carried forward that analysis into the ROD (USDA 1996a) with the following management standard for goshawk habitat: “Sustain a mosaic of vegetation densities (overstory and understory), age classes and species composition across the landscape. Provide foods and cover for goshawk prey.” In support of that standard, the 1996 Record of Decision amending Forest Plans, including the Prescott Forest Plan, explicitly incorporated the *Management Recommendations for the Northern Goshawk in the Southwestern United States* (Reynolds et al. 1992), which state on page 15:

We designed foraging areas consisting of forest conditions that would provide a high overall diversity and abundance of prey [...] Sufficient prey habitats are provided so there is food to support goshawks in all seasons, especially during winter when fewer prey are available, and in years when prey populations are low due to factors such as drought or deep snow cover. Because no single species will be abundant enough to support goshawks, especially during the winter, habitats for all 14 prey species are provided.

In goshawk post-fledging areas (“PFA”), “prey habitat should be intermixed with dense hiding cover,” and features of prey habitat in PFA include “small (<2 acre) openings in the tree canopy

to produce herbaceous and shrubby foods for the herbivorous prey” (Reynolds et al. 1992: 15-16). Those “openings” constitute Vegetation Structure Stage One (“VSS 1”). See USDA (1996: 92) (defining VSS 1 as “grass/forb/shrub”). In forage areas outside of PFA, the Forest Service applied the scientific recommendations to provide for a diversity of habitat conditions required by goshawk prey species. See Reynolds and others (1992: 16-17) (summarizing “the importance of snags, downed logs, openings, large trees, herbaceous and shrubby understories, and interspersions of VSS to the selected prey species of the goshawk”). The recommendations and the 1996 ROD amending the Forest Plans, including the Prescott Forest Plan, assumed that “Openings, and associated herbaceous and shrubby vegetation, provide important food and cover for a number of goshawk prey species.” *Id.* at 17. The recommendations also acknowledged that “Interspersion measures the degree of intermixing of vegetation structural stages. Only the red squirrel responds negatively to interspersions of structural stages; its populations reach a maximum in unbroken old forests.” *Id.* at 18. Recognizing the importance of “closed forests” to red squirrel and six other goshawk prey species, the management recommendations further state:

[G]oshawk foraging habitat in the three forest types consists of forests with relatively open understories and large trees. Large trees are required for hunting perches, and openness provides opportunity for detection and capture of prey by goshawks. These forests have small to medium openings (<4 acres) and patches of dense mid-aged forests. Openings are scattered to:

- 1) enhance the availability of food and habitat resources of prey that use them, and
- 2) limit the effect of large openings on the distribution and abundance of prey species that use interior forests.

Id. According to the Forest Service, “Alternative G incorporates the needs of the Mexican spotted owl and northern goshawk. The science behind the needs are contained in two publications, ‘Mexican Spotted Owl Recovery Plan’ and ‘Management Recommendations for the Northern Goshawk in the Southwestern United States’ (GTR RM-217, 1992).” USDA (1995: 27). Therefore, the amended Forest Plans, including the former Prescott Forest Plan now repealed, incorporated the scientific recommendations discussed above to ensure the viability of goshawk prey species with an assumption that approximately 20 percent of forest lands will consist of relatively open, early-seral vegetation, including grass/forb/shrub openings. The Forest Service stated in NEPA analysis (USDA 1995) that intermixing of six VSS classes, as prescribed by the amended Forest Plan standards and guidelines, would maintain viable populations of the goshawk and its 14 prey species.

The FEIS supporting the revised Prescott Forest Plan does not address any of the prior scientific analysis or management recommendations relevant to viability of northern goshawk or prey species. It acknowledges that the raptor exhibits specialized habitat needs for its essential life histories and that it is present on the Prescott National Forest:

Habitats – Northern goshawk nesting habitat consists of mature and old growth forest stands with relatively high canopy closure. The northern goshawk is associated with the ponderosa pine PNVTs and tree features for every aspect of its life history from nesting,

to roosting, to foraging. Goshawks are known to occur on all three of the ranger districts of the Prescott NF including areas near Mingus Mountain, Camp Wood, Prescott Basin, and Crown King. Existing nesting habitat for this species is estimated at 50,489 acres, consisting of ponderosa pine stands with medium and large trees with open and closed canopies. Existing foraging habitat for goshawks includes approximately 3,522 acres of seedling/sapling and small trees with open canopies in both ponderosa pine PNVTs.

FEIS at 80. The analysis further describes “risk factors” affecting northern goshawk:

Primary threats to northern goshawks include activities that remove older, larger trees and simplify stand structure; removal of dead and down trees; and stand-replacement wildfire. Management concerns also include grazing that reduces or eliminates understory vegetation and human disturbance during nesting (Arizona Game and Fish Department, 1999).

Id. And it identifies northern goshawk as a management indicator species associated with ponderosa pine forest:

Northern goshawk was chosen as an indicator because it demonstrates a strong and/or predictable response to proposed management activities within the ponderosa pine PNVTs including prescribed fire; timber harvest; shrub and tree thinning/removal; and road and/or trail maintenance. By monitoring Northern goshawk habitats and populations, the health and productivity of ponderosa pine forest ecosystems can be assessed.

Id. at 86. The only specific mention in the FEIS of the scientific recommendations of Reynolds and others (1992) that underpinned the 1996 Forest Plan Amendments (USDA 1996a) is as follows:

All 14 prey species listed for the northern goshawk in the “Management Recommendations for Northern Goshawks” (MRNG) (Forest Service, 1992) are associated with medium/large tree vegetative structural stages. Medium/large trees are important habitat components to 13 of the 14 prey species for maintaining sustainable populations. Canopy openings are important for maintaining sustainable populations for 8 of the 14 prey species listed in the MRNG. Herbaceous and shrub components are important for 13 of the 14 prey species. Ten of the 14 prey species listed in the MRNG are associated with early seral stages including seedling/saplings and small trees. All 14 prey species need an interspersed of vegetative structural stages to maintain sustainable populations.

Id. at 87. Notably, the analysis does not mention that one goshawk prey species, red squirrel, exclusively uses closed-canopy forest habitat, or that six of the 14 prey species exhibit life histories that need or prefer “closed forest” (Reynolds et al. 1992: 18). Indeed, the canopy cover guidelines in the former Forest Plan, now repealed, existed to provide for the viability of “all 14 prey species” that associate with “medium/large tree vegetative structural stages,” as well as the goshawk:

PFA provide the young hawks with cover from predators, and sufficient prey to develop hunting skills and feed themselves in the weeks before juvenile dispersal. Thus, forests in the PFAs should contain overstories with a canopy cover greater than 50% and well-developed understories and habitat attributes (e.g., snags, nest trees, foods) critical in the life-histories of goshawk prey species.

Reynolds et al. (1992: 14). The FEIS ignores the best available science regarding viability of goshawk and prey species, and concludes that reduced canopy cover will benefit those species:

All alternatives would provide increases in the amount and quality of goshawk habitat available on Prescott NF lands. Over the next 20 years, additional nesting habitat for the goshawk would occur from increases in the abundance and distribution of medium to large trees growing within the ponderosa pine PNVTs. Proposed vegetation treatments (Objective-5) that reduce canopy closure and increase understory vegetation would improve habitat for goshawk prey species across the landscape. Improving these two facets of the goshawk habitat would be expected to have beneficial impacts to the species on the Prescott NF.

For all of the alternatives, the various guidelines for sensitive species would be expected to maintain or improve tree features associated with goshawk habitat needs. Sensitive species guidelines include developing breeding season timing restrictions and other project design features to alleviate impacts from disturbance from timber harvest, prescribed burning, and other resource management activities.

FEIS at 93-94. The analysis fails to explain the stated expectation that “additional nesting habitat for the goshawk would occur from increases in the abundance and distribution of medium to large trees.”⁷ Even if vegetation treatments successfully reduce tree density and improve growing conditions on all acres of ponderosa pine forest under the revised Forest Plan, large tree recruitment will be more limiting over time as chronic drought imposes widespread tree mortality (Seager et al. 2007, Seager and Vecchi 2010, Williams et al. 2012). The revised Forest Plan is not specific about proposed treatments in ponderosa pine forest habitat: it merely proposes managed fire, mechanical thinning and “habitat improvement” on up to 408,000 acres over 10 years.

In addition, the FEIS fails to explain its theory that proposed rollbacks of mandatory standards and guidelines affecting management of ponderosa pine forest would “improve” the viability of northern goshawk or its prey:

Reducing canopy cover and increasing understory vegetation would improve habitat for goshawk prey species including small mammals and small birds across the landscape. Moving acres into the seedling/sapling and small tree vegetative structural stages would create an interspersed of structural stages across the landscape. The diversity of habitats associated with the assortment of vegetative features would support a greater selection of prey species. This would provide conditions supporting a full complement of prey species

⁷ The FEIS likewise fails to explain similar statements regarding effects to habitat of Mexican spotted owl resulting from new management direction under the revised Prescott Forest Plan.

and habitat less susceptible to catastrophic fire and insect and disease impacts. By providing a diverse suite of prey species, the goshawk prey base would be more consistent and resilient to impacts from climate, disease, predation, and prey species population fluctuations.

FEIS at 94. The Forest Service previously stated in NEPA analysis that the former Forest Plan, as amended by the scientific recommendations of Reynolds and others (1992), discussed above, would maintain viable populations of goshawk and its 14 prey species by interspersing the six VSS classes with approximately 20 percent of ponderosa pine forest consisting of relatively open, early-seral vegetation including grass/forb/shrub openings (USDA 1995). The FEIS contains no explanation why the revised Forest Plan will accomplish viability better than the former Forest Plan, now repealed. In fact, it completely fails to consider effects that may result from reduction of forest habitat for goshawk or prey species that prefer closed-canopy or old forest structure.

By repealing former standards and guidelines that constrained management of northern goshawk habitat, the Forest Service undermines previously established scientific basis for ensuring viability of the goshawk and its prey. The Forest Service previously based action alternatives in two environmental impact statements on those standards and guidelines (USDA 1995, 2006). In doing so, it established a habitat-proxy relation of ponderosa pine forest structure to goshawk viability, and a proxy-on-proxy relation of goshawk habitat to viability of 14 prey species that reflected the best available science. The prior framework, now repealed by the revised Prescott Forest Plan, was sufficient to meet the NFMA requirements.

Notably, the only mention of “mid-aged to old” forest in the revised Prescott Forest Plan isolates it to small groups (“2 to 40 trees per group”) generally one acre or less in area. The desired condition for “interlocking or nearly interlocking” tree crowns in ponderosa pine PNVT occurs within small groups of trees surrounded by open “interspaces” consisting of “a native grass/forb/shrub mix” (*i.e.*, early-seral vegetation). The desired condition does not specify whether the ponderosa forest type should be dominated by tree groups or by interspace, or what spatial spread of vegetation stages might be considered appropriate. Further, there is no requirement in the revised Forest Plan for retention of existing old forest, nor is any level of canopy cover desired in ponderosa pine PNVT. Land managers are invited but not required to consider locating nest areas and family areas – with no particular expectation of management within them other than desired conditions that are common to each area, and may not be achieved for decades or centuries – and to “minimize” noise in the nesting season. The revised Forest Plan is a significant retraction of previously established standards and guidelines, and it requires explanation for such a drastic change of management approach in ponderosa pine forest.

Nowhere in the planning record does the Forest Service provide a rationale for eliminating the standards and guidelines that benefited wildlife, ensured viability, and avoided jeopardy or adverse modification to critical habitat, as were contained in the amended 1987 Forest Plan that is now repealed. Therefore, the decision to adopt the revised Prescott Forest Plan is arbitrary and capricious and in violation of the NEPA, the NFMA and the APA. Moreover, the lack of binding management standards affecting project-level effects to habitat, particularly for threatened MSO and sensitive goshawk, violates the NFMA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of management direction and plan components applicable to threatened and sensitive wildlife species and habitats.
- Ensure that the revised Forest Plan contains adequate management direction and plan components to meet minimum management requirements of the NFMA.

V. Arbitrary and capricious determinations of grazing capability and suitability.

Regulations implementing NFMA require the Forest Service to determine “the suitability and potential capability of National Forest System lands for producing forage for grazing animals and for providing habitat for management indicator species.” 36 C.F.R. § 219.20 (1982). “The present and potential supply of forage for livestock, wild and free-roaming horses and burros, and the capability of these lands to produce suitable food and cover selected wildlife species shall be estimated.” *Id.* § 219.20(a). Where the agency identifies lands that are “in less than satisfactory condition,” it “shall” plan for their restoration. *Id.* The agency must consider, among other things, “possible conflict or beneficial interactions among livestock, wild free-roaming horses and burros and wild animal populations, and [...] direction for rehabilitation of ranges in unsatisfactory condition...” *Id.* § 219.20(b).

To inform analysis of grazing suitability, the Center requested in comment on the DEIS for revision of the Prescott Forest Plan that the Forest Service consider and analyze the following criteria for designating lands as unsuitable for grazing:

- High or severe soil erosion hazard identified by Terrestrial Ecosystem Survey.
- Slopes steeper than 30 percent.
- Lands within 200 feet of perennial or intermittent streams or wetlands.
- Occupied and/or critical habitat of threatened or endangered species or species proposed for listing.
- Designated conservation areas for sensitive or management indicator species.
- Occupied locations of endemic species.
- Lands impacted by high-severity fire effects to vegetation or soil.

In contrast, the Forest Service applied only three factors to determine which lands on the Prescott National Forest are generally capable of supporting livestock grazing. *See* FEIS Vol. 2 at 91 (“For this analysis, three measures are used to determine capability: (1) forage productivity, (2) inherently unstable soils, and (3) slopes steeper than 60 percent”); *also see id.* at 92 (“The area capable of producing forage for grazing animals was the starting point for determining current range suitability. This area was 1,009,821 acres”). All of the action alternatives in the FEIS designate the same 913,078 acres as suitable for grazing. *See* FEIS Vol. 2 at 92 (Table 6); *also see* FEIS Vol. 1 at 104 (“Currently active grazing allotments do not vary across alternatives...”).

It is not clear from the analysis how the Forest Service estimated present and potential forage supply or the capability of those lands to produce food and cover for wildlife. *See* DEIS at 118 (“The capability of the lands on the Prescott NF to produce forage for grazing animals was determined in the 1980s during the first round of forest planning”). The agency scrubbed that particular statement from the FEIS, but it remains part of the analysis record. Instead, the final analysis states,

A large portion of the capability determination is based upon factors such as landform, geology, slope, and climate. These have not changed significantly since the previous evaluation undertaken for the 1987 plan. Current drought conditions and trends have not been shown to be outside of historical norms for the Southwest.

FEIS Vol. 2 at 91. In point of fact, drought conditions and trends in the Southwest, including on the Prescott National Forest, far exceed the range of variation considered during creation of the 1987 Forest Plan. The analysis assumption that forest lands will remain capable of producing forage for livestock in addition to wildlife, a showing required by the NFMA, is in serious doubt. Failure to consider relevant scientific information that runs contrary to management assumptions in the revised Forest Plan is arbitrary, capricious, and in violation of the NFMA, the NEPA and the APA.

The Center stressed in comment on the DEIS that foreseeable chronic drought in the Southwestern Region, including the Prescott National Forest, approaches conditions not seen in nearly a millennium. Prior estimates of range capability in the 1987 Forest Plan did not account for synergistic effects of livestock grazing and climate change on soil, water, vegetation and fire regimes (Beschta et al. 2012). The Prescott National Forest will never again return to “historical norms” that supported forage production capacity over the past century, as assumed by the FEIS and supporting analyses of grazing capability and suitability.

Despite ample uncertainties in model projections of hydroclimate change, and the continuation of natural climate variability on all timescales, it seems very probable that SWNA will be drier in the current century than in the one just past. Skillful prediction of the magnitude and timing of this drying will require prediction of the rate of anthropogenic change and prediction of the evolving natural variability for which currently there is scant evidence of any predictability beyond the interannual timescale. Another likely outcome is a continuing decline in winter snowpack and earlier onset of snow melt that will add to the stress on regional water resources. The implications of these hydroclimate changes will vary across the region. For Mexico, though winter precipitation is expected to decline, the future of the North American monsoon, important for water resources and agriculture, will be critical and remains uncertain.

Seager and Vecchi (2010: 21282). Williams and others (2012) noted that while average winter precipitation totals in the Southwest have not been exceptionally low in the recent past, average summer-fall evaporative demand since 2000 is the highest in the past 1,000 years. Forest drought stress over much of the past 13 years, including in 2011 and 2012, matched or exceeded the recorded “megadroughts” of the 13th and 16th centuries. The only other 13-year periods when similar conditions occurred with such frequencies in the past 1,000 years were during the

megadroughts themselves. The strongest megadrought occurred during the second half of the 1200s and is believed to have played an important role in the abandonment of ancient Puebloan cultural centers throughout the Southwest. The observed trends in drought stress on forest conditions coincide with strong climate model agreement on anthropogenic greenhouse warming. Model projections indicate that megadrought-level stresses on water availability and vegetation production will be regularly exceeded by the mid-21st century, and even the wettest and coolest years of the late-21st century will be more severe than the driest, warmest years of the past millennium (Williams et al. 2012). We commented in response to the DEIS that the analysis must address uncertainty in grazing capacity estimates that originate from the 1980s, and that the NFMA requires such capability and suitability determinations to be reasonably accurate. 40 C.F.R. § 1508.27(b)(5); 36 C.F.R. § 219.20 (1982). The FEIS and the revised Forest Plan fail on both counts, in violation of the NEPA, the NFMA and the APA.

The grazing suitability determination in the revised Prescott Forest Plan suffers two additional fatal flaws that necessitate remand of the FEIS for further analysis. First, the only screen applied by the Forest Service to distinguish lands “capable” of producing livestock forage from those determined to be “suitable” for livestock grazing was to exclude only the largest chunks of grazing allotments that have been identified in site-specific NEPA analysis as unsuitable:

The planning team identified additional areas which were excluded from livestock grazing, including those excluded by NEPA (National Environmental Policy Act) decisions and portions of allotments that were excluded from grazing activity after 1987. Since inception of the 1987 plan, 50 allotments on the Prescott NF have received site-specific environmental review and several areas were excluded from grazing in project-level decisions. Large, contiguous areas (at least 1,000 acres) that were excluded in site-specific decisions were deemed to be not suitable for livestock grazing for this suitability analysis. These areas totaled 57,055 acres.

FEIS Vol. 2 at 92. In the suitability determination for the Prescott Forest Plan, any tract of less than 1,000 acres previously withdrawn from grazing by a NEPA decision remains “suitable” and thereby subject to inclusion in an allotment at a later time. There is no reason or explanation for the 1,000-acre threshold applied to the suitability determination. It is arbitrary and capricious, and in violation of the NEPA, the NFMA and the APA. All lands withdrawn from livestock grazing by a prior NEPA decision should be analyzed in the Forest Plan revision as unsuitable.

Second, the grazing suitability determination in the revised Prescott Forest Plan fails to distinguish lands that are in “satisfactory” condition from lands that the Forest Service considers to be less-than-satisfactory or otherwise impaired condition. The determination assumes that suitable lands are “full capacity,” *i.e.*, “those which can be used by grazing animals under proper management without long-term damage to the soil resource or plant communities” (USDA 2011a: 3-6). However, most of the lands designated as suitable for grazing currently are in less-than-satisfactory (*i.e.*, unsatisfactory or impaired) condition. *See* FEIS Vol. 1 at 100 (Table 24 shows 60 percent of subwatersheds impaired or at-risk due to soil condition and only two out of 97 subwatersheds with satisfactory condition for rangeland vegetation); 102 (Table 25 shows uplands within 15 of 22 watersheds have reduced watershed condition integrity due to departed

soil and/or vegetation conditions). Less-than-satisfactory conditions persist despite changes in range management enacted under the prior 1987 Forest Plan:

Of the 69 grazing allotments on the Forest, 29 are exhibiting resource degradation because of overstocking, lack of proper management or both and are classified as unsatisfactory. Many of the other grazing allotments require improved management. Of the 977,934 acres of full capacity range, 54 percent of the acres are in satisfactory range condition and 46 percent in unsatisfactory condition.

USDA (1987: 97). Indeed, the record points to a sustained downward trend in range capacity on the Prescott National Forest, as updated analysis indicates more lands in unsatisfactory condition than in the 1980s.

Furthermore, the revised Prescott Forest Plan does not rehabilitate or restore lands that are considered suitable for livestock grazing, but exhibit less-than-satisfactory soil conditions. It would only rehabilitate unwanted roads and impacts of recreation activities – no rehabilitation of degraded upland soils is proposed. At most, “restoration treatments” would affect up to 253,000 acres with managed fire, up to 90,000 acres with “habitat improvement,” and up to 65,000 acres with mechanical thinning over the 10-year life of the plan. Therefore, less than half of suitable rangelands that exhibit less-than-satisfactory condition would be rehabilitated or restored, yet grazing would continue to be allowed under capability estimates from the 1980s, contrary to the NFMA. Continued cumulative adverse effects of livestock grazing on the environment under the revised Forest Plan are likely to be significant, but are not disclosed in the FEIS, in violation of the NEPA and the APA.

Changes Sought:

- Withdraw the ROD and remand the EIS for further analysis of grazing capability and suitability to account for chronic and deepening foreseeable drought conditions affecting forage production, prior withdrawal of forest lands from grazing suitability by site-specific NEPA decisions, and worsening soil and watershed conditions that are caused, in part, by livestock grazing.
- Ensure that the revised Forest Plan contains adequate management direction to restore and rehabilitate forest lands degraded by livestock grazing, as required by the NFMA.

Conclusion

Contact information for each appellant is provided on page two of this notice of appeal. Communication regarding this notice of appeal may be directed to the undersigned lead appellant. Please timely notify us of any development in your review of this notice of appeal, and provide a written decision at the addresses shown below.

Sincerely,



Jay Lininger, Senior Scientist
Center for Biological Diversity
P.O. Box 710
Tucson, AZ 85702-0710
Tel: (928) 853-9929
Email: jlininger@biologicaldiversity.org

FOR:

Sandy Bahr, Chapter Director
Sierra Club Grand Canyon Chapter
202 E. McDowell Rd., Suite 277
Phoenix, AZ 85004
Tel: (602) 253-8633
Email: sandy.bahr@sierraclub.org

[Signature confirmation available upon request]

Att.

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